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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,053	<b>Applicant(s)</b> VETELAINEN ET AL.	
	<b>Examiner</b> ECE HUR	<b>Art Unit</b> 2175	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 9, 2008 has been entered. This application is a new PCT National Stage application of PCT/FI04/00592 that was filed on October 7 2004. Applicant is claiming foreign priority for the application 20031563 filed on October 24, 2003 in Finland. Claims 1, 13, 19-20, and 23-29 have been amended for clarification. Claims 2-3, 7-11, and 21-22 have been amended accordingly.

***Status of Claims***

Claims 1-29 are pending in the case. Claims 1, 13, 19 and 23 are independent Claims.

Claims 1-29 are rejected under U.S.C. 103(a).

***Response to Arguments***

Applicant's arguments filed June 9, 2008 have been fully considered but they are not persuasive. See rejection details. Applicant argued:

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1) Applicant has remarks about the amended Claims. Amendment necessitated the new ground(s) of rejection presented in this Office action.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1, 2, 4-7 and 12-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Astala, US 6,590,568 in view of Cheng-Hung, US 6,397,232.

Regarding Claim 1, Astala discloses the claimed aspect of a method for shifting the a content of a first shortcut key and a content of a second shortcut key belonging to the a user interface of an electronic device, in which method the contents of the first shortcut key(FIG.6b—c, FILE 1) and the second shortcut key(FIG. 6b-c, DIR2) are shifted between each other with of by making a drag and drop operation, wherein a method and apparatus for dragging and dropping items displayed on a touch screen and the item on the touch screen is touched with a pressure greater than a first predetermined pressure for a first predetermined period of time. The pressure on the item is then reduced, and the item is dragged with the reduced pressure to a second location at which the touch screen is touched with a pressure greater than a second predetermined pressure for a time duration greater than a second predetermined time period. (Astala, See Abstract, lines 1-8). Additionally, Astala discloses that the item on the touch screen is touched with a pressure greater than a predetermined pressure for a first predetermined period of time, and then the touch screen is touched at a second location with a pressure greater than the predetermined pressure for a second predetermined period of time, less than the first predetermined period of time. (Astala, See Abstract, lines 9-16).

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Astala discloses the claimed aspect of shifting a first shortcut key and with its attached content to a second shortcut key (Astala, FIG. 6b-d). Astala does not specifically disclose the claimed aspect of “and shifting the second shortcut key operation with its attached content to the first shortcut key by performing one drag and drop operation from the first shortcut key to the second shortcut key”. However, Cheng-Hung discloses the claimed aspect of interchanging document files, wherein interchanging of document files among different systems can be feasible. (Cheng-Hung, US 6,397,232).

It would be obvious to one of ordinary skill in the art at the time of the invention to add the concept of interchanging of document files to Astala’s drag and drop input system, because this would allow the user or the system interchange files for different platforms.

Regarding Claim 2, most of the limitations have been met in the rejection of Claim 1. See the rejection of Claim 1. Astala discloses the claimed aspect of one wherein of the following the electronic apparatus is embodied on one of: a cellular network terminal, a PC, a portable computer or a palm computer in FIG. 3, FIG. 4 and FIG. 5, wherein a mobile terminal and MDA (Mobile Display Appliance) system are illustrated.

Regarding Claim 4, most of the limitations have been met in the rejection of Claim 3. See the rejection of Claim 3 for details. Astala discloses the claimed aspect of wherein the first shortcut key to be shifted is selected to become a

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shifted shortcut key by pressing the touch screen with the aid of an object at a position of the first shortcut key, wherein a touch screen technique is provided for an electronic device in which the location and the time duration of an object, such as a finger or stylus or other pointed object is used and contacting or pressing a detection point on the touch screen, are detected. (Astala, Page 2, Paragraph 20, lines 1-5). More specifically, Astala discloses that the pressure and velocity could be of a finger or other object contacting the touch screen. (Astala, Page 2, Paragraph 5, lines 5-8).

Regarding Claim 5, most of the limitations have been met in the rejection of Claim 4. See the rejection of Claim 4 for details. Astala discloses the claimed aspect of wherein the content of the first shortcut key is shifted to become the content of the second shortcut key by moving the object used in the selection on the touch screen from a position above the first shortcut key to a position over the second shortcut key, where the object is raised from the touch screen, whereby the raising of the object initiates the shifting of the content of the first shortcut key to become the content of the second shortcut key in FIGURE 6a-d, wherein specifically FIG. 6c illustrates the second touch input 736 being made over the image of directory 2 in window 730. At step 718, the x and y coordinates of the second touch input 736 are determined, and at step 720, the object of the second touch, that is, the selected item of the second touch, is determined to be directory 2. At step 722, the object of the first touch input, that is, file 1, is then

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moved to the object of the second touch input, that is, directory 2. The process is then ended at step 724. FIG. 6d illustrates that file 1 has been moved from directory 3. (Astala, Page 9, Paragraphs 55-60).

Regarding Claim 6, most of the limitations have been met in the rejection of Claim 4. See the rejection of Claim 4 for details. Astala discloses the claimed aspect of a function attached to the first shortcut key is executed when the object used to select the first shortcut key is raised from the touch screen above the first shortcut key, wherein in order to retrieve information or to request services from the MDA server 28 or the Internet 26, the user might utilize the input touch screen 70. The user can provide input using a virtual keyboard displayed on the display 70, using keyboard 72, or through the touch screen input on the touch screen 70 utilizing various processes and functions according to the embodiments of the invention. Even though the virtual keyboard may be used as the user retrieves information from the Internet 26, such as a web page, the user can receive the information at the display 70 of the terminal 20 in a full screen format. Full screen format is available because the virtual keyboard disappears when the user types a Universal Resource Locator (URL) or follows a hyperlink while navigating the Internet 26. In order to return to the virtual keyboard, the user presses a button 80, and the virtual keyboard as well as the header and footer related to the services are presented again. Additionally, once the user presses the button 80, the web page, which was a full screen display prior to pressing the button 80, is reduced to a thumbnail view and positioned in the



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display 70, such as in the bottom left corner of the footer. Consequently, the user has a shortcut to quickly access the web page that was previously visited or to save that web page as a bookmark. (Astala, Page 7, Paragraphs 5-25).

Regarding Claim 7, most of the limitations have been met in the rejection of Claim 4. See the rejection of Claim 4 for details. Astala discloses the claimed aspect of a raising of the object used to select the shortcut key from the touch screen somewhere else than above a shortcut key cancels the initiated shifting of the contents of the first shortcut key in FIGURE 6a, wherein at step 704 at step 704, a timer is started upon the detection of the object pressing the touch screen 70, and at step 706, the x and y coordinates of the touch input 732 are read. That is, the location of the object at its contact point with the touch screen 70 is determined. (Astala, Page 9, Paragraph 20). As next at step 714, a determination that a drag operation is occurring may be discerned by detecting changes in the x and y coordinates over a predetermined period of time while allowing for discontinuities in the pressure of the object on the touch screen caused by momentary lifting of the object from the face of the touch screen 70 during the drag operation. (Astala, Page 9, Paragraph 40, lines 4-9). Applicant should duly note that the system needs to determine the coordinates of the shortcut keys. Furthermore raising an object or unclicking the mouse during a drag operation cancels the shifting of the content of any shortcut key. (Microsoft Office Products).

Regarding Claim 12, most of the limitations have been met in the rejection of Claim 5. See the rejection of Claim 5 for details. Astala discloses the claimed aspect of the content of a shortcut key is a function defined for a shortcut key in FIG. 6b-d, wherein a FILE 1 is dragged to DIR2. Additionally, Hawkins discloses the claimed aspect of the contents of a shortcut key means a function defined for a shortcut key in Figure 5, wherein shortcut keys with a function are illustrated.

Regarding Claim 13, Astala discloses the claimed aspect of a touch screen comprising a shortcut menu comprising at least two separate shortcut keys, a first and a second shortcut key (FIG. 6b-c, FILE 1, DIR 2). The rejection for Claim 1 applies to Claim 13. See rejection details for Claim 1.

Regarding Claim 14, most of the limitations have been met in the rejection of Claim 13. See the rejection of Claim 13 for details. Astala discloses the claimed aspect of the first shortcut key is selected to become shifted by pressing the touch screen with an object at the first shortcut key, wherein a touch screen technique is provided for an electronic device in which the location and the time duration of an object, such as a finger or stylus or other pointed object is used and contacting or pressing a detection point on the touch screen, are detected. (Astala, Page 2, Paragraph 20, lines 1-5). More specifically, Astala discloses that the pressure and velocity could be of a finger or other object contacting the touch screen. (Astala, Page 2, Paragraph 5, lines 5-8).

Regarding Claim 15, most of the limitations have been met in the rejection of Claim 14. See the rejection of Claim 14 for details. Astala discloses the claimed aspect of wherein the content of the first shortcut key is configured to be changed to become the content of the second shortcut key by moving the object used for selecting on the touch screen from a position above the first shortcut key to a position above the second shortcut key, where raising of the object from the touch screen is configured to initiate the shifting of the content of the first shortcut key to become the content of the second shortcut key in FIGURES 6a-d, wherein specifically FIG. 6c illustrates the second touch input 736 being made over the image of directory 2 in window 730. At step 718, the x and y coordinates of the second touch input 736 are determined, and at step 720, the object of the second touch, that is, the selected item of the second touch, is determined to be directory 2. At step 722, the object of the first touch input, that is, file 1, is then moved to the object of the second touch input, that is, directory 2. The process is then ended at step 724. FIG. 6d illustrates that file 1 has been moved from directory 3. (Astala, Page 9, Paragraphs 55-60).

Regarding Claim 16, most of the limitations have been met in the rejection of Claim 14. See the rejection of Claim 14 for details. Astala discloses the claimed aspect of a function attached to the first shortcut key is configured to be executed when the object used to select the first shortcut key is raised from the touch screen above the first shortcut key, wherein in order to retrieve information or to request services from the MDA server 28 or the Internet 26, the user might

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utilize the input touch screen 70. The user can provide input using a virtual keyboard displayed on the display 70, using keyboard 72, or through the touch screen input on the touch screen 70 utilizing various processes and functions according to the embodiments of the invention. Even though the virtual keyboard may be used as the user retrieves information from the Internet 26, such as a web page, the user can receive the information at the display 70 of the terminal 20 in a full screen format. Full screen format is available because the virtual keyboard disappears when the user types a Universal Resource Locator (URL) or follows a hyperlink while navigating the Internet 26. In order to return to the virtual keyboard, the user presses a button 80, and the virtual keyboard as well as the header and footer related to the services are presented again.

Additionally, once the user presses the button 80, the web page, which was a full screen display prior to pressing the button 80, is reduced to a thumbnail view and positioned in the display 70, such as in the bottom left corner of the footer.

Consequently, the user has a shortcut to quickly access the web page that was previously visited or to save that web page as a bookmark. (Astala, Page 7, Paragraphs 5-25).

Regarding Claim 17, most of the limitations have been met in the rejection of Claim 14. See the rejection of Claim 14 for details. Astala discloses the claimed aspect of the raising of the object used to select the shortcut key from the touch screen somewhere else than above a shortcut key is configured to cancel the initiated shifting of the content of the first shortcut key in FIGURE 6a,

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wherein at step 704 at step 704, a timer is started upon the detection of the object pressing the touch screen 70, and at step 706, the x and y coordinates of the touch input 732 are read. That is, the location of the object at its contact point with the touch screen 70 is determined. (Astala, Page 9, Paragraph 20). As next at step 714, a determination that a drag operation is occurring may be discerned by detecting changes in the x and y coordinates over a predetermined period of time while allowing for discontinuities in the pressure of the object on the touch screen caused by momentary lifting of the object from the face of the touch screen 70 during the drag operation. (Astala, Page 9, Paragraph 40, lines 4-9). Applicant should duly note that the system needs to determine the coordinates of the shortcut keys. Furthermore raising an object or unclicking the mouse during a drag operation cancels the shifting of the content of any shortcut key. (Microsoft Office Products).

Regarding Claim 18, most of the limitations have been met in the rejection of Claim 15. See the rejection of Claim 15 for details. Astala discloses the claimed aspect of a content of a shortcut key is a function defined to be executed by the shortcut key in FIG. 6b-d, wherein a FILE 1 is dragged to DIR2. Additionally, Hawkins discloses the claimed aspect of the contents of a shortcut key means a function defined for a shortcut key in Figure 5, wherein shortcut keys with a function are illustrated.

Regarding Claim 19, Astala discloses the claimed aspect of an electronic apparatus with a user interface comprising at least two separate shortcut keys, a first and a second shortcut key with interchangeable contents. The rejection for Claim 1 applies to Claim 19. See rejection details for Claim 1.

Regarding Claim 20, most of the limitations have been met in the rejection of Claim 19. See the rejection of Claim 19 for details. Astala discloses the claimed aspect of the electronic apparatus comprises a touch screen, configured to operate as the display and user interface, where on which on the touch screen there is formed a shortcut menu with at least two shortcut keys with interchangeable contents, wherein a method and apparatus for dragging and dropping items displayed on a touch screen and the item on the touch screen is touched with a pressure greater than a first predetermined pressure for a first predetermined period of time. The pressure on the item is then reduced, and the item is dragged with the reduced pressure to a second location at which the touch screen is touched with a pressure greater than a second predetermined pressure for a time duration greater than a second predetermined time period. Additionally, Astala discloses that the item on the touch screen is touched with a pressure greater than a predetermined pressure for a first predetermined period of time, and then the touch screen is touched at a second location with a pressure greater than the predetermined pressure for a second predetermined period of time, less than the first predetermined period of time. (Astala, See Abstract).

Regarding Claim 21, most of the limitations have been met in the rejection of Claim 20. See the rejection of Claim 20 for details. Astala discloses the claimed aspect of a content of a shortcut key is a function defined to be executed by a shortcut key in FIG. 6b-d, wherein a FILE 1 is dragged to DIR2. Additionally, Hawkins discloses the claimed aspect of the contents of a shortcut key means a function defined for a shortcut key in Figure 5, wherein shortcut keys with a function are illustrated.

Regarding Claim 22, most of the limitations have been met in the rejection of Claim 21. See the rejection of Claim 21 for details. Astala discloses the claimed aspect of one of following: a cellular network terminal, a portable computer or a palm computer in FIG. 3, FIG. 4 and FIG. 5, wherein a mobile terminal and MDA (Mobile Display Appliance) system are illustrated.

Regarding Claim 23, Astala discloses the claimed aspect of a computer readable storage medium comprising an application program executable by a central processing unit to perform actions for shifting a content of a first shortcut key and a second shortcut key, wherein FIG. 3 is a block diagram of a mobile terminal 20a that operates within the MDA system of FIG. 1. Terminals 20b and 20c may be similar in design. Terminal 20a may include a touch screen 70 for providing a display, a keyboard 72, a browser 74, a driver 76, and hardware 78. The hardware 78 may include a memory for storing data, such as the Internet address of the global address server 36, and the software for operating the

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terminal 20, such as the browser 74. (Astala, Page 6, Paragraph 25, lines 1-8).

Furthermore, Astala discloses the claimed aspect of a method for shifting the contents of a first shortcut key and a second shortcut key belonging to the user interface of an electronic device, characterized in that the contents of the first shortcut key and the second shortcut key is shifted between each other with the aid of a drag and drop method, wherein a method and apparatus for dragging and dropping items displayed on a touch screen and the item on the touch screen is touched with a pressure greater than a first predetermined pressure for a first predetermined period of time. The pressure on the item is then reduced, and the item is dragged with the reduced pressure to a second location at which the touch screen is touched with a pressure greater than a second predetermined pressure for a time duration greater than a second predetermined time period. Additionally, Astala discloses that the item on the touch screen is touched with a pressure greater than a predetermined pressure for a first predetermined period of time, and then the touch screen is touched at a second location with a pressure greater than the predetermined pressure for a second predetermined period of time, less than the first predetermined period of time. (Astala, See Abstract).

The rejection for Claim 1 applies to Claim 23. See rejection details for Claim 1.

Regarding Claim 24, most of the limitations have been met in the rejection of Claim 23. See the rejection of Claim 23 for details. Astala discloses the



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claimed aspect of program embodied in a portable device, and executable to shift the shortcut keys in a shortcut menu created on a touch screen, of the portable device in FIG. 3, FIG. 4 and FIG. 5, wherein a mobile terminal and MDA (Mobile Display Appliance) system are illustrated.

Regarding Claim 25, most of the limitations have been met in the rejection of Claims 5 and 24. See the rejection of Claims 5 and 24 for details. Astala discloses the claimed aspect of a selecting of a first shortcut key, whereby the selection is made by pressing the touch screen with an object, wherein a touch screen technique is provided for an electronic device in which the location and the time duration of an object, such as a finger or stylus or other pointed object is used and contacting or pressing a detection point on the touch screen, are detected. (Astala, Page 2, Paragraph 20, lines 1-5). More specifically, Astala discloses that the pressure and velocity could be of a finger or other object contacting the touch screen. (Astala, Page 2, Paragraph 5, lines 5-8).

Astala discloses the claimed aspect of a detecting whether the object is raised from the touch screen at a position of the selected first shortcut key and a detection of a movement of the object on the surface of the touch screen away from the position above the first shortcut key, and when the object is not raised at the position of the selected first shortcut key further comprising, wherein in order to retrieve information or to request services from the MDA server 28 or the Internet 26, the user might utilize the input touch screen 70. The user can provide input using a virtual keyboard displayed on the display 70, using keyboard 72, or

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through the touch screen input on the touch screen 70 utilizing various processes and functions according to the embodiments of the invention. Even though the virtual keyboard may be used as the user retrieves information from the Internet 26, such as a web page, the user can receive the information at the display 70 of the terminal 20 in a full screen format. Full screen format is available because the virtual keyboard disappears when the user types a Universal Resource Locator (URL) or follows a hyperlink while navigating the Internet 26. In order to return to the virtual keyboard, the user presses a button 80, and the virtual keyboard as well as the header and footer related to the services are presented again.

Additionally, once the user presses the button 80, the web page, which was a full screen display prior to pressing the button 80, is reduced to a thumbnail view and positioned in the display 70, such as in the bottom left corner of the footer.

Consequently, the user has a shortcut to quickly access the web page that was previously visited or to save that web page as a bookmark. (Astala, Page 7, Paragraphs 5-25).

Astala discloses the claimed aspect of a detecting a movement whether the object is raised from the surface of the touch screen at a position of a the second shortcut key in FIGURE 6a, wherein at step 704 At step 704, a timer is started upon the detection of the object pressing the touch screen 70, and at step 706, the x and y coordinates of the touch input 732 are read. That is, the location of the object at its contact point with the touch screen 70 is determined. (Astala, Page 9, Paragraph 20). As next at step 714, a determination that a drag operation is occurring may be discerned by detecting changes in the x and y

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coordinates over a predetermined period of time while allowing for discontinuities in the pressure of the object on the touch screen caused by momentary lifting of the object from the face of the touch screen 70 during the drag operation.

(Astala, Page 9, Paragraph 40, lines 4-9).

Astala discloses the claimed aspect of if the object is raised then interchanging the content of the first shortcut key and the content of the second shortcut key in FIGURE 6a-d, wherein specifically FIG. 6c illustrates the second touch input 736 being made over the image of directory 2 in window 730. At step 718, the x and y coordinates of the second touch input 736 are determined, and at step 720, the object of the second touch, that is, the selected item of the second touch, is determined to be directory 2. At step 722, the object of the first touch input, that is, file 1, is then moved to the object of the second touch input, that is, directory 2. The process is then ended at step 724. FIG. 6d illustrates that file 1 has been moved from directory 3. (Astala, Page 9, Paragraphs 55-60).

Regarding Claim 26, most of the limitations have been met in the rejection of Claim 25. See the rejection of Claim 25 for details. Astala discloses the claimed aspect of a function connected to the first shortcut key when the object is raised from the touch screen at the position of the first shortcut key, wherein in order to retrieve information or to request services from the MDA server 28 or the Internet 26, the user might utilize the input touch screen 70. The user can provide input using a virtual keyboard displayed on the display 70, using keyboard 72, or through the touch screen input on the touch screen 70 utilizing various processes

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and functions according to the embodiments of the invention. Even though the virtual keyboard may be used as the user retrieves information from the Internet 26, such as a web page, the user can receive the information at the display 70 of the terminal 20 in a full screen format. Full screen format is available because the virtual keyboard disappears when the user types a Universal Resource Locator (URL) or follows a hyperlink while navigating the Internet 26. In order to return to the virtual keyboard, the user presses a button 80, and the virtual keyboard as well as the header and footer related to the services are presented again.

Additionally, once the user presses the button 80, the web page, which was a full screen display prior to pressing the button 80, is reduced to a thumbnail view and positioned in the display 70, such as in the bottom left corner of the footer.

Consequently, the user has a shortcut to quickly access the web page that was previously visited or to save that web page as a bookmark. (Astala, Page 7, Paragraphs 5-25).

Regarding Claim 27, most of the limitations have been met in the rejection of Claim 25. See the rejection of Claim 25 for details. Astala discloses the claimed aspect of cancelling the shifting of the content of the first shortcut key when the object is raised from the touch screen in an area, which is not defined to belong to a shortcut key in FIGURE 6a, wherein at step 704 at step 704, a timer is started upon the detection of the object pressing the touch screen 70, and at step 706, the x and y coordinates of the touch input 732 are read. That is, the location of the object at its contact point with the touch screen 70 is

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determined. (Astala, Page 9, Paragraph 20). As next at step 714, a determination that a drag operation is occurring may be discerned by detecting changes in the x and y coordinates over a predetermined period of time while allowing for discontinuities in the pressure of the object on the touch screen caused by momentary lifting of the object from the face of the touch screen 70 during the drag operation. (Astala, Page 9, Paragraph 40, lines 4-9). Applicant should duly note that the system needs to determine the coordinates of the shortcut keys. Furthermore raising an object or unclicking the mouse during a drag operation cancels the shifting of the content of any shortcut key. (Microsoft Office Products).

Regarding Claim 28, most of the limitations have been met in the rejection of Claim 27. See the rejection of Claim 27 for details. Astala discloses the claimed aspect of a content of a shortcut key is a function defined to be executed by the shortcut key in FIG. 6b-d, wherein a FILE 1 is dragged to DIR2. Additionally, Hawkins discloses the claimed aspect of the contents of a shortcut key means a function defined for a shortcut key in Figure 5, wherein shortcut keys with a function are illustrated.

Regarding Claim 29, most of the limitations have been met in the rejection of Claim 28. See the rejection of Claim 28 for details. Astala discloses the claimed aspect of embodied in one of the following devices: a cellular network terminal, a portable computer or a palm computer in FIG. 3, FIG. 4 and FIG. 5,

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wherein a mobile terminal and MDA (Mobile Display Appliance) system are illustrated.

**Claim 3 is** rejected under 35 U.S.C. 103(a) as being unpatentable over Astala, US 6,590,568 in view of Cheng-Hung, US 6,397,232 and in further view of Hawkins, US 6,781,575.

Regarding Claim 3, most of the limitations have been met in the rejection of Claim 2. See the rejection of Claim 2 for details. Astala discloses in FIG. 3, 4 and 5 mobile terminal. However, Astala does not teach specifically the claimed aspect of a touch screen used as the display unit of the electronic apparatus, and a shortcut menu is created on the touch screen. However, Hawkins discloses the claimed aspect of a touch screen used as the display unit of the electronic device, whereby a shortcut menu is created on the touch screen in FIGURE 5 and FIGURE 6, wherein new, edit, delete and done options on touch screen are illustrated.

It would be obvious to one ordinary skill in the art at the time of the invention to combine Astala's touch screen drag and drop method, Cheng-Hung's document interchange concept with Hawkins touch screen organizing elements, because as the size of these communication devices decreases and as the number of functions increases, it has become increasingly important for a user to be able to enter commands and information into the communication

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device in an efficient manner and with a reduction in size of the device, a keypad input device must also be reduced in size, thereby decreasing the efficiency with which information can be inputted by reducing the number and size of the keys.(Astala, Page 1, Paragraphs 30-35).

**Claims 8-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Astala, US 6,590,568 in view of Cheng-Hung, US 6,397,232 and in further view of Leavitt et al., US 20020085037.

Regarding Claim 8, most of the limitations have been met in the rejection of Claim 2. See the rejection of Claim 2 for details. Astala does not teach the claimed aspect of first shortcut key is selected to become shifted by selecting it among the shortcut keys on the display of the electronic apparatus with a button of a mouse belonging to the user interface of the electronic apparatus. However, Leavitt discloses the claimed aspect of first shortcut key is selected to become shifted by selecting it among the shortcut keys on the display of the electronic device with the button of a mouse belonging to the user interface of the electronic device, wherein a cursor-based computing environment with a display and a user definable interface (UDI) is displayed upon activation by a user. UDI has a plurality of buttons and is displayed in a relative position about a cursor position to reduce cursor commute. Leavitt discloses that the user to select a visual appearance and shape of the UDI, and the number of buttons. More specifically, this technique allows users to

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assign a command to each of the plurality of buttons by dragging and dropping from one or more applications of the apparatus. (Leavitt, See Abstract).

It would be obvious to one of ordinary skill in the art at the time of the invention to combine Astala's touch screen technique, Cheng-Hung's document interchange concept with Leavitt's cursor-based drag input technique, because it would allow the users to have different mode of drag system.

Regarding Claim 9 most of the limitations have been met in the rejection of Claim 8. See the rejection of Claim 8 for details. Leavitt discloses the claimed aspect of a content of the first shortcut key is shifted to become a content of the second shortcut key by moving a cursor connected to the mouse on the display of the electronic apparatus from a position above the first shortcut key to a position above the second shortcut key, where the mouse button is released, whereby the releasing of the mouse button initiates the shifting of the contents of the first shortcut key to become the contents of the second shortcut key, wherein users can click and drag shortcuts from the Windows desktop or Windows Explorer to a Zenu.TM. button of the present invention. This will cause the button to have the same action as the shortcut. If a file that is not a shortcut is dragged from Windows Explorer to a Zenu.TM. button, the Zenu.TM. UDI will make the button a shortcut pointing to the file



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that was dragged. For instance, if the user drags a Microsoft.RTM. Word or notepad document onto a Zenu.TM. button, clicking that Zenu.TM. button will now open the document that was dragged onto the button. This overrides the default action of the button defined in the template or theme file as well as user-defined commands. (Leavitt, Page 8, Paragraph 0131).

Regarding Claim 10, most of the limitations have been met in the rejection of Claim 8. See the rejection of Claim 8 for details. Astala discloses the claimed aspect of the object used to select the shortcut key is released on the display of the electronic apparatus somewhere else than above a shortcut key, then the initiated shifting of a content of the first shortcut key is cancelled, wherein in FIGURE 6a, wherein at step 704 at step 704, a timer is started upon the detection of the object pressing the touch screen 70, and at step 706, the x and y coordinates of the touch input 732 are read. That is, the location of the object at its contact point with the touch screen 70 is determined. (Astala, Page 9, Paragraph 20). As next at step 714, a determination that a drag operation is occurring may be discerned by detecting changes in the x and y coordinates over a predetermined period of time while allowing for discontinuities in the pressure of the object on the touch screen caused by momentary lifting of the object from the face of the touch screen 70 during the drag operation. (Astala, Page 9, Paragraph 40, lines 4-9). Astala does not teach the aspect of the mouse button. However, Leavitt discloses the aspect of mouse button in use of drag drop.

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It would be obvious to one of ordinary skill in the art at the time of the invention to combine Astala's object aided drag and drop technique, Cheng-Hung's document interchange concept with Leavitt's mouse button use, because this would allow the users to have a choice to use different mode of drag-drop system. Furthermore it is commonly known that raising an object or uncliccking the mouse during a drag operation cancels the shifting of the content of any shortcut key. (Microsoft Office Products).

Regarding Claim 11, most of the limitations have been met in the rejection of Claim 9. See the rejection of Claim 9 for details. Leavitt discloses the claimed aspect of the shifting of a shortcut key made on the display of the electronic apparatus further causes the functions attached to a first key belonging to a physical keyboard of the electronic apparatus to be shifted to a second key of the keyboard, wherein Zenu.TM. 200 permits the user to assign commands to the buttons by dragging and dropping from one or more applications associated with (e.g., capable of running on, or otherwise coupled to) the apparatus. (Leavitt, Page 4, Paragraph 0061, lines 12-15).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- 1) Hube, et al., 5,119,079, 06/02/1992, "Touch screen user interface with expanding touch locations for a reprographic machine".
- 2) Moriwaki, US 6,288,732, 09/11/2001, "Information processor".
- 3) Padawer, Andrew D. et al., US 20020115476 , 08//22/2002, "Shortcut system for use in a mobile electronic device and method thereof".
- 4) Moon, et al. , US 6,433,801, 08/13/2002, "Method and apparatus for using a touch screen display on a portable intelligent communications device".
- 5) Kinawi, et al., US 6,545,669 , 04/08/2003, "Object-drag continuity between discontinuous touch-screens".
- 6) Lindhorst, Gregory S. et al., US 20040066410 A1, "Drag and drop creation and editing of a page incorporating scripts".
- 7) Lien, Shun-Yi, 20050026644 A1, "Cellular phone for specific person".
- 8) Cummins, Charles et al., US 20060070007 A1 and US 20070016872, "Rich drag drop user interface".
- 9) Morishima, US 7,181,250, 02/20/2007, "Mobile phone".
- 10) Shen; Jia-Lin; et al., US 20070124149 A1, "User-defined speech-controlled shortcut module and method thereof".

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ECE HUR whose telephone number is (571) 270-1972. The examiner can normally be reached on Mon-Thurs 7:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM BASHORE can be reached on 571-272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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August 17, 2008

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